

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A method of identifying a reagent that modulates a lipid comprising the steps of:
(a) exposing said reagent to HBM or Zmax1;
(b) determining whether said reagent binds to HBM or Zmax1;
(c) administering said reagent to an animal and determining whether said reagent modulates a lipid in said animal ~~a molecule involved in lipid regulation comprising identifying a molecule that binds to, or that inhibits binding of a molecule to, HBM or Zmax1.~~

Claim 2. (Currently Amended) The method of claim 1, wherein said reagent molecule is a protein, an mRNA, or an antisense nucleic acid.

Claims 3-5. Cancelled.

Claim 6. (Currently Amended) A method for identifying reagent that modulates a lipid ~~identification of a candidate molecule involved in lipid regulation~~ comprising:

(A) ~~identifying a first molecule that binds to, or that inhibits binding of a second molecule to, the~~ a nucleic acid sequence of either (i) a Zmax1 nucleic acid chosen from among the sequence of SEQ ID NO: 1, and a Zmax1 nucleic acid comprising a polymorphism of Table 4, except for the C/A base change at location 21119 (308G), or (ii) a HBM nucleic acid having SEQ ID NO: 2;

(B) ~~measuring the binding of the first molecule, or inhibition of the binding of the second molecule, to~~ SEQ ID NO: 1, SEQ ID NO: 2, or the Zmax1 nucleic acid comprising polymorphism the other of either (i) the Zmax1 nucleic acid or (ii) the HBM nucleic acid; and,

(C) comparing the extent of binding of the first molecule to each nucleic acid sequence, wherein the molecule that binds, or inhibits binding, more or less to the HBM nucleic acid sequence of SEQ ID NO: 2 versus the Zmax1 nucleic acid sequence of SEQ ID NO: 1 or a Zmax1 nucleic acid comprising a polymorphism of Table 4, except for the C/A base change at location 21119 (308G), is the candidate molecule.

Claim 7. (Currently Amended) The method of claim 6, wherein the candidate molecule is a protein, an mRNA, or an antisense nucleic acid.

Claims 8-47. Cancelled.

Claim 48. (Previously Presented) The method of claim 1, wherein the HBM or Zmax1 is in solution.

Claim 49. (Previously Presented) The method of claim 1, wherein the HBM or Zmax1 is affixed to a solid support.

Claim 50. (Previously Presented) The method of claim 1, wherein the HBM or Zmax1 is located on a cell surface.

Claim 51. (Previously Presented) The method of claim 1, wherein the HBM or Zmax1 is expressed by a host cell.

Claim 52. (Currently Amended) The method of claim 48, wherein step (b) is determined by exposing said reagent in a mixture with a known ligand to HBM or to Zmax and assessing competitive binding of said agent to said known ligand ~~the molecule which binds to HBM or Zmax1 is identified by assaying the competitive binding of the molecule to HBM or Zmax1 in the presence of a known ligand.~~

Claim 53. (Currently Amended) The A method of claim 1, wherein HBM is SEQ ID NO:4 ~~identifying a molecule involved in lipid regulation comprising identifying a molecule that binds to, or that inhibits binding of a molecule to, HBM (SEQ ID NO:4).~~

Claim 54. (Currently Amended) The method of claim 2, wherein binding of said reagent ~~the molecule~~ is identified by co-immunoprecipitation with HBM or Zmax1.

Claim 55. (Currently Amended) The method of claim 2, wherein binding of said reagent ~~the molecule~~ is identified by co-fractionation with HBM or Zmax1.

Claim 56. (Currently Amended) The method of claim 2, wherein binding of said reagent ~~the molecule~~ is identified by binding to HBM or Zmax1 via a two-hybrid system in which a bait vector encodes an ~~the~~ extracellular domain of HBM or Zmax1 ~~is encoded on a bait vector.~~

Claim 57. (Currently Amended) The method of claim 1, further comprising determining whether said reagent differentially binds to Zmax1 versus HBM ~~wherein the molecule binds to, or inhibits binding of a molecule to, HBM more or less than to Zmax1.~~

Claim 58. (Currently Amended) The method of claim 1, wherein said reagent ~~the step of identifying a molecule that binds to, or that inhibits binding of a molecule to, HBM or Zmax1 is a step of identifying a molecule that binds to, or that inhibits binding of a molecule to HBM.~~

Claim 59. (Currently Amended) The method of claim 1, wherein said reagent ~~the step of identifying a molecule that binds to, or that inhibits binding of a molecule to, HBM or Zmax1 is a step of identifying a molecule that binds to, or that inhibits binding of a molecule to Zmax1.~~

Claim 60. (Currently Amended) The method of claim 1, wherein said reagent ~~the step of identifying a molecule that binds to, or that inhibits binding of a molecule to, HBM or Zmax1 is a step of identifying a molecule that binds to, or that inhibits binding of a molecule to HBM and to Zmax1.~~

Claim 61. (Currently Amended) The method of claim 1 further comprising the step of determining whether the reagent ~~molecule~~ that binds to, ~~or that inhibits binding of a molecule to, HBM and/or~~ or Zmax1 ~~is a molecule that binds to, or that inhibits binding of a molecule to HBM to a greater or lesser extent than to Zmax1, and wherein the molecule involved in lipid regulation is a molecule that binds to, or that inhibits binding of a molecule to HBM to a greater or lesser extent than to Zmax1.~~

Claim 62. (New) The method of Claim 58, wherein the HBM is a protein.

Claim 63. (New) The method of Claim 59, wherein the Zmax1 is a protein.

Claim 64. (New) The method of Claim 60, wherein the Zmax1 and HBM are protein.

Claim 65. (New) The method of Claim 2, wherein said reagent is a protein.

Claim 66. (New) The method of Claim 1, wherein the lipid is a triglyceride and/or a very low density lipoprotein (VLDL) and wherein the reagent reduces the amount of triglyceride and/or VLDL in the animal.

Claim 67. (New) The method of Claim 6, wherein the lipid is a triglyceride or a very low density lipoprotein (VLDL) and wherein the reagent reduces amount of triglyceride and/or VLDL in the animal.